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ABSTRACT

A number of studies on the order of adjectives in the English noun phrase are reviewed. Analysis of the studies and examples used in them indicates that almost any order of adjective seems to be possible depending on the intended meaning of the speaker or the situation in which the speaker frames an utterance. To see if in fact the ordering of adjectives is semantically based, and to determine if there is a set order for adjectives in the English noun phrase, three questionnaires were designed and administered to more than 100 students attending Arizona State University. Three groups of students were represented: upperclass and graduate students, freshmen, and foreign students. Some of the results indicate that: (1) students are not sure of the order of adjectives that do not occur very frequently in the language; (2) some phrases are so ordered because they exist as the habitual form of the phrase, for example, "old gray mare"; (3) the questionnaire that compared student preferences with those of a linguist did not indicate a widespread degree of support for the linguist's ordering. The evidence in the questionnaires would seem to indicate that all rules are subject to variation in the speech of native speakers. (AMH)

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Title Page

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Adjective Order

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Teaching the Order of Adjectives in the English Noun Phrase

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Some previous studies on the order of adjectives

There have been a number of studies on the order of adjectives in the English noun phrase. Hetzron (1978) in his study on the order of adjectives reviews some of these. For instance, he makes a single comment on the Vendler (1968) study stating: "The translation of Vendler's categories into semantic terms is beyond the scope of this paper" (Hetzron, 1978:168). To him, the Vendler study suffers from the formalism of most transformational studies. Hetzron seems to feel that Vendler's study on the order of adjectives in English simply could not be converted to a semantically based study, the kind that should be used to predict the order of adjectives in English. Actually, the problem with the Vendler work is much more deeply seated. In

the first place, Vendler's intuitions regarding the data are inaccurate. For instance, at one point, he marks descriptive adjectives in this manner, requiring a particular order:

comfortable red chair *red comfortable chair (1968:122)

A few pages later, he then permits both orderings with similar adjectives:

> He drove out in his new yellow car.
> versus
> He drove out in his yellow new car (1968:130).

Not only does he do this, but when he comments on the two sentences, he states:

> He drove out in his new yellow car.
> versus
> He drove out in his yellow new car.
>
> The first adheres to the natural order: new yellow. Consequently, the sentence means that he drove out in his car which is yellow and which is new (1968:130).

What he is saying can be paraphrased as follows:

> In the frame of reference there are two yellow cars; he drove out in the new one.

Surely, this cannot be correct. The facts are actually the reverse of what Vendler maintains. He should be saying something on this order:

> In the frame of reference there are two new cars; he drove out in the yellow one.

It is in this sense that Vendler's intuitions are simply wrong; as a result, much of his study is invalid. Besides this, Vendler is inclined to confuse categories that he sets up for the prediction of the order of adjectives. For instance, in his discussion of non-emotive adjectives, he mentions the inverted order of adjectives in reference to the noun phrase <u>yellow new car.</u> Then he says of these: "Such inverted phrases usually are uttered with a strong emphasis on the first adjective:

> ye'llow new car ... " (1968:130).

When he discusses the emotive adjectives he states:

> "long horrible play
> small awful insect

warm delightful room

are as good as

horrible long play
awful small insect
delightful warm room

There is one difference though. The last three forms are apt to have a strong emphasis on the first adjective, while adjectives in the first three examples carry equal stress."

Since adjectives belonging to the two categories, emotive and non-emotive, function in a similar fashion, there may be some question as to whether there is in fact two different categories here.

Randolph Quirk and his colleagues suggest an order of adjectives in the noun phrase summarized in the following chart (1976:925):

					PROVENANCE			
DET (etc.)	GENERAL +	AGE +	COLOR +	PARTIC.	+ STYLE +	NOUN +	DENOMINAL +	HEAD
the	hectic						social	life
the	extravagant					London	social	life
a				crumbling		church		tower
a			gray	crumbling	Gothic	church		tower
some	intricate	old		interlocking	Chinese			designs
a	small		green	carved		jade		idol
his	heavy	new					moral	responsibilities

Fig. 13:7 Premodification

There are a number of problems with this attempt to predict the order of adjectives in the noun phrase. One of the greatest of these may reside in the fact that Quirk and his colleagues seem unable to define the term 'denominal' consistently. On p. 263, denominal adjectives are defined as those that are " . . . derived from nouns . . ." Some of these evidently belong to the class of adjectives that can occur in attributive position only. These can also be divided into those which denote 'agent' or 'material' and include criminal, woollen and atomic. On p. 267,

they are defined as denoting material and include silken, metallic, and cat-like. On p. 925, in the formula offered by Quirk and his colleagues, the adjectives social and moral are offered as examples without any definition whatsoever. Besides this, although previous definitions of denominal adjectives include largely adjectives of material and agent, these two adjectives are neither. Attempts, therefore, to find denominal adjectives which fit the position assigned to them by Quirk et al. have failed.

Even after these writers on the problem have suggested a fixed order for the adjectives in the noun phrase, they appear to give it up for a different analysis of the ordering of adjectives in the noun phrase. In this ordering they feel that a semantic dimension which they label " . . . subjective / objective polarity . . ." Accounts for the ordering of the adjectives in the noun phrase. These semantic dimensions are defined by their statement that:

> . . . modifiers relating to properties which are (relatively) inherent in the head of the noun phrase, visually observable, objectively recognizable or assessible, will tend to be placed nearer to the head and be preceded by modifiers concerned with what is relatively a matter of opinion, imposed on the head by the observer, not visually observed and only

> subjectively assessible. One need hardly add that, with criteria that are themselves so subjective, there is plenty of room for a difference of opinion (1972:925).

In this formula, the distinction suffers from the fact that it is difficult to assign individual adjectives to the respective classes on the admission of the authors themselves.

It would appear to this observer, however, that the Quirk et al. attempt to predict the order of adjectives in the noun phrase is wrongly motivated. This can be seen in the different readings of the noun phrase pairs that he uses to prove his point. For instance, in the phrases at (1) and (2), there is a difference in the intended meaning of the speakers depending on the referent which they select.

(1) A tall fat man . . .
(2) A fat tall man . . .

The first, (1), refers to a fat man who is tall; the second, (2), refers to a tall man who is fat. Conceivably, there are two entirely different physical types of individuals who can be referenced by these two phrases.

Quirk and Greenbaum (1973) attempt to use a model for the

order of adjectives in the noun phrase similar to that of their earlier model (1972) in that the largest group of adjectives are broken into subjective adjectives such as careful and lovely and objective adjectives such as those which deal with size and shape. They avoid the problem with denominal adjectives pointed out in reference to the earlier work by specifying that these are adjectives of provenance and style. Their formula for the ordering of adjectives in the English noun phrase is as follows:

INTENSIFYING, QUANTIFIERS & LIMITERS, GENERAL - Subjective, GENERAL - objective, AGE, COLOR, MATERIAL, DENOMINAL
(Provenance, Style)
(1973:Sec. 5.20)

But the fact that the Quirk and Greenbaum formula for the prediction of the order of adjectives is wrongly motivated can be seen in the following:

(3) The very grand symmetrical cathedral ...
(4) The grand, very symmetrical cathedral ...
(5) The very symmetrical grand cathedral ...

From this it is apparent that the order of the adjectives in the noun head is not entirely a function of the nature of the adjectives themselves. It is rather a function of the nature of the adjectives and the intended meaning of the entire noun phrase

in the mind of the speaker. Any speaker can change the order of adjectives to express some particular meaning.

In addition to the difficulties noted to this point, there are additional difficulties with any attempt to put a class of color adjectives in a position following descriptive adjectives. As Hetzron (1978:176) notes, the following are the preferred orders for old and gray in two different noun phrases at (6):

(6) (a) an old gray mare
(b) a gray old man
(c) an old gray - haired man

Besides these, any number of different examples can be adduced to show the difficulty in developing a fixed formula as in the sentences at (7):

(7) a. The restless black quivering tree . . .
b. The black quivering restless tree . . .
c. The quivering black restless tree . . .
d. The generous young growing man . . .
e. The young growing generous man . . .
f. The growing young generous man . . .

The Quirk et al. formula would permit only (7a) and (7d) as the

grammatically correct forms but it would seem that the (b) and (c) versions, on the one hand, and the (e) and (f) versions, on the other hand, are acceptable, especially if they have certain types of intonation.

In order to see if there are any fixed orders for the adjectives in the English noun phrase, sets of two and three adjectives have been checked against the suggested order of Quirk et al. who suggests that English grammar requires participles to precede color adjectives. Not only does this seem not to be the case in the phrases at (7) but it seems also not to be the case in the phrases at (8) where (8b) is clearly to be preferred over (8a) although the order seems to be non-important in (8c) and (8d):

(8) a. ... the green rotten tree ...
b. ... the rotten green tree ...
c. ... the green living tree ...
d. ... the living green tree ...

The case of (8c) and (8d) seems to be true of a great number of other forms.

Furthermore, many of the schemes for ordering adjectives seem to work for the examples given as in the following:

NUMBER	INTENSIFIER	QUALITY OR SIZE	COLOR	NATIONALITY	NOUN	NOUN
one	extremely	small	green			hat
two	very	pretty	gray			cats
one		large		Swedish		couch
ten		warm			winter	coats
three				Japanese	silk	blouses
a	really	nice		American	kitchen	chair

But the stated orders can be changed to express the intended meaning of the speaker. For instance, (9a) could be considered the normal order of adjectives in the phrase, but (9b) is certainly also possible as is (9c).

(9) a. ... one extremely small green hat ...

b. ... a very green small hat ...

c. ... a small, very green hat ...

Similarly, although (10) one large Swedish couch is undoubtedly correct but (11) one Swedish large couch is also possible especially if there are two kinds of Swedish couches, Swedish large couches and Swedish small couches. In the same way, although (12) three Japanese silk blouses could be expected but (13) three silk Japanese blouses is certainly acceptable, especially if there is a style of blouse known as the Japanese blouse. Thus, almost any order of adjective seems to be possible depending on the intended meaning of the speaker or the situation

in which the speaker frames an utterance. At this point, it may be possible to argue that patterns which depart from the 'normal' require 'contrastive stress' or 'comma intonation.' But researchers to this point have not argued in this manner. They have usually presented their schemes for the order of adjectives in the noun phrase on the assumption that there is a single, right order for adjectives depending on inherent classes. It is even difficult to assert with surety that adjectives of nationality precede quality adjectives since (14) Russian great coats is possible. It would appear that the only sacrosanct orders involve the determiners which must be at the beginning of the noun phrase and nouns which are part of nominal nominal compounds. These must be directly before the noun head.

Intuitions Regarding the Ordering of Adjectives

To see if in fact (1) the ordering of adjectives is semantically based, and (2) to determine if there is in fact a set order for adjectives in the English noun phrase three questionnaires were designed and administered to well over 100 students attending Arizona State University. These students came from three clearly marked groups of students: upperclassmen and graduate students (n=27); freshmen n=132 and foreign students (n=33) for the first questionnaire. Rising out of the first two purposes in the administration of the questionnaire was a third: (3) to determine if the indeterminacy shown by the students in marking the questionnaire is in fact related to word frequency as

obtained from Kucera and Francis (1967) and Thorndike (1944). This indeterminacy is measured as the number of times that the less frequently chosen categories were selected. A perusal of Appendix I will show that the indeterminacy rate for the first item (little old man vs. old little man) is the lowest (6) and the indeterminacy rate for the fourth item (gray old man vs. old gray man) is the highest (67). Similar generalizations can be made about the data in Appendix II, the second questionnaire.

A correlation analysis was done of the rating of the first questionnaire by all the groups of students who marked; all of the correlations show that, for all practical purposes, the various groups were checking the differing categories in the same way with the indices of correlation ranging from .9368 to .8975. (See Appendices IV through VIII.) As far as the findings on the first questionnaire are concerned, the following observations are relevant. Word frequency is negatively correlated with the rate of indeterminacy (Appendices IX and X). This is true for all items except items (3) and (4) (gray old mare vs. old gray mare and gray old man vs. old gray man) and items (11) and (12) with the Kucera word frequency. The former (3 and 4) were not designed to test word frequency but were designed to determine if factors other than word frequency operate in the selection of the order of adjectives in the noun phrases. The latter show a differing problem: the two word frequency lists do not aggree. Kucera has vicious as being more frequent than fierce. For

Thorndike, the reverse is true. The Thorndikian ranking of the adjectives is in accord with the expected choice of categories on the questionnaire: a negative correlation exists between the frequency of the adjectives and the disagreement that students show in choosing a preferred order of adjectives. Thus it is that word frequency is negatively correlated with the indeterminacy rate; students are not sure of the order of adjectives that do not occur very frequently in the language.

As far as the first two purposes of the study are concerned the evidence is not so clear. A comparison of little old man with venerable little man would seem to indicate that semantic criteria do not dominate in the selection of the order of adjectives in the noun phrase since both of these are the preferred forms but in the one, the adjective expressing age comes first; in the other the order is reversed. Evidence from the choices made in conjunction with items (3 and 4), gray old mare vs. old gray mare and gray old man vs. old gray man, suggest another source for the order of adjectives in English. Obviously, for items (3) and (4), the frequency of adjectives is not a determining factor since all of the adjectives are the same. It would rather seem to be the familiarity of the phrase that is the governing factor. In fact, one graduate student indicated as much by noting in the margin, " ... the old gray mare she ain't what she used to be ... " Thus it would seem to be that little old man and old gray mare exist as stock phrases,

almost as idioms, learned and retained as such. Thus, the possibility remains that venerable little man has the noted order because each of the adjectives fit in semantic classes that conform to the indicated order. Similar statements could be made about other adjectives in the study. But the phrase little old man exists as the habitual form of the phrase, a veritable idiom.

Only on one set of questionnaires and one particular measure did the students show a significant difference on the way they marked the first questionnaire. The foreign students (n=33) did not mark the questionnaire on 'native speaker intuition' in the same way as the native speakers (n=132) as far as their indeterminacy rate is concerned. An analysis of variance yielded a 't' of 4.379 which is significant beyond the .01 level of confidence in a camparison of the indeterminacy rates of the native and foreign students. A proprtional analysis of their responses reveals that the foreign students were much less sure of the responses than the native speakers showing an average indeterminacy rate of .40 against the .28 indeterminacy rate of the native speakers.

On the second questionnaire (Appendix II), the findings on the first questionnaire were duplicated but with a different set of adjectives. In the first place, the students in each group showed a great consistency in marking the questionnaires. In the second place, in all cases, the frequency of the

adjectives in the language as a whole correlated negatively with the indeterminacy rate in the judgements of the native speakers. To state this concept in other words: native speakers are not as sure of the position of uncommon adjectives as they are of common adjectives. Even though this is true, one of the adjectives of color fuschia showed a pattern of responses that came close to making it an exception. The respondents were almost as sure of the position of fuschia as they were of the adjective, pink. Actually, although this seems to make fuschia an exception to the rule, there may be an explanation for this near exception. Students my simply have been placing the adjective in reference to the common adjective new. In the third place, as far as the indeterminacy rate is concerned, the foreign students showed a great degree of uncertainity in marking the questionnaires than the native speakers yielding a t of 4.437 which is significant at the .001 level of confidence (Appendix XVII). Thus in all respects, the findings on the second questionnaire corroborated the findings on the first questionnaire.

The third questionnaire has been constructed with a different motivation from that which led to the construction of the first two. This questionnaire (Appendix III) was constructed to see if the native speaker intuition of the various students agreed with that of a linguist, Hetzron (1978). The Hetzron order for these adjectives is at (3) (A) and (7) (B). A perusal of the questionnaire would indicate that only 56% of the native

speaking students chose the Hetzron order on item (3) and 42% of the students chose the Hetzron order on item (7). This does not indicate a very widespread degree of support for the Hetzron ordering. From this it is difficult to tell if in fact there is a predictable order for the adjectives in this noun phrase. Students do prefer the Hetzron phrase but not at a significantly higher rate than they prefer the same phrase with different ordering. On the whole, students do not select this order at a significantly higher rate than they select other orderings. If in fact there were such things as hard and fast rules which govern the selection of adjectives, it would be expected that students would reject other orderings by marking the category 'A seems about the same as B,' but they do not. In fact, they show a greater rate of indeterminacy on the average in the selection of the various orderings on this questionnaire (.51) than they do on the others (.31). On item 7, the students show a higher indeterminacy rate (.58) than they do on the questionnaire as a whole. On item 3, the same is true (.44) but at a slightly lesser rate. This is simply a way of saying that the subjects are not sure whether the adjectives in the Hetzron ordering are ordered in a definite manner. This is also true for the questionnaire as a whole. Whereas the students are quite sure of the ordering of phrases like <u>little old man</u> and even <u>new fuschia dress,</u> they are not sure of their responses on the questionnaire with six prenominal adjectives. In fact, on the average they are less sure of the orderings of adjectives in phrases with six

prenominal modifiers than they are with responses on questionnaires with only two such modifiers. In fact, some students commented on this very thing with statements which showed that the questionnaire with six adjectives presented a frustrating, almost impossible task. Similar statements could be made about the responses of foreign students who, nevertheless, showed an indeterminacy rate which was significantly different from that of the native students on this questionnaire.

It would then seem that there are at least three processes at work in the selection of the order of adjectives in the noun phrase: (1) idiom formation or some process similar to this, (2) rule governed ordering and (3) length constraints. The first of these (1) is necessary to account for the stock phrases such as little old man. A concept such as idiom formation is useful and can be accommodated within a two phase theory of language as proposed by William Gallagher (1976) although such a concept is not widely held within current linguistic theory. The second of these (2) is widely held in current theory but is held in a form which does not adequately reflect the findings here on native speaker intuition. There is, however, one form of the notion of 'rule' which nicely accommodates the view here and that is Labov's notion of 'variable rule.' The evidence in the questionnaires would seem to indicate that all rules are subject to variation in the idiolects of native speakers. This would seem to be true because, as in examples (1) to (4) at the start

of the paper, native speakers can, at any given time, chose orders for adjectives that do not conform to the dominant orders. They can do this to express differing meanings or to capture stylistic variants. Thus because native speakers can optionally chose different orderings of the adjectives, all rules are variable. The third factor influencing native speaker intuition is the length constraint. At least in isolation, all combinations of adjectives in noun phrases seem equally good or bad when these combinations exceed a minimal number of adjectives in the noun phrase such as two or three.

Questions on the English Language APPENDIX I JWNey, Fall 1981

Here are some questions designed to find out what you feel about the order of words in some phrases in the English language. Check the appropriate blank.

1. A. "... the old little man ..."	A seems better than B	3
B. "... the little old man ..."	B seems better than A	126
	A seems about the same as B	3
2. A. "... the venerable little man ..."	A seems better than B	106
B. "... the little venerable man ..."	B seems better than A	18
	A seems about the same as B	6
3. A. "... the gray old mare ..."	A seems better than B	9
B. "... the old gray mare ..."	B seems better than A	116
	A seems about the same as B	7
4. A. "... the gray old man ..."	A seems better than B	65
B. "... the old gray man ..."	B seems better than A	43
	A seems about the same as B	24
5. A. "... the bubbly young woman ..."	A seems better than B	88
B. "... the young bubbly woman ..."	B seems better than A	23
	A seems about the same as B	20
6. A. "... the effervescent young woman ..."	A seems better than B	85
B. "... the young effervescent woman ..."	B seems better than A	30
	A seems about the same as B	17
7. A. "... the angry rioting citizens ..."	A seems better than B	106
B. "... the rioting angry citizens ..."	B seems better than A	17
	A seems about the same as B	9
8. A. "... the irate rioting citizens ..."	A seems better than B	86
B. "... the rioting irate citizens ..."	B seems better than A	31
	A seems about the same as B	16
9. A. "... the fancy modern ornament ..."	A seems better than B	92
B. "... the modern fancy ornament ..."	B seems better than A	22
	A seems about the same as B	18
10. A. "... the modern tawdry ornament ..."	A seems better than B	38
B. "... the tawdry modern ornament ..."	B seems better than A	70
	A seems about the same as B	24
11. A. "... the vicious hardened criminal ..."	A seems better than B	82
B. "... the hardened vicious criminal ..."	B seems better than A	37
	A seems about the same as B	18
12. A. "... the fierce hardened criminal ..."	A seems better than B	100
B. "... the hardened fierce criminal ..."	B seems better than A	18
	A seems about the same as B	14

Thorndike: old AA; venerable 6; fierce 44; vicious 9; gray AA; bubble 28; effervescent 1; irate 0; angry A fancy A; tawdry 0

Kucera: old 660; venerable 5; fierce 8; vicious 17; gray 80; bubble 12; effervescent 00; irate 1; angry 45; fancy 16; tawdry 2

Questions on the English Language JWNey, Fall 1981

Here are some questions designed to find out what you feel about the order of words in some phrases in the English language. Check the appropriate blank.

1. A. "... the sweet little man ..."	A seems better than B	109	7
B. "... the little sweet man ..."	B seems better than A	5	2
	A seems about the same as B	1	6
2. A. "... the mild-mannered little man ..."	A seems better than B	84	7
B. "... the little mild-mannered man ..."	B seems better than A	22	7
	A seems about the same as B	8	1
3. A. "... the fuschia new dress ..."	A seems better than B	9	1
B. "... the new fuschia dress ..."	B seems better than A	104	13
	A seems about the same as B	1	1
4. A. "... the pink new dress ..."	A seems better than B	10	1
B. "... the new pink dress ..."	B seems better than A	107	11
	A seems about the same as B	3	0
5. A. "... the bright month-old baby ..."	A seems better than B	89	5
B. "... the month-old bright baby ..."	B seems better than A	16	8
	A seems about the same as B	10	2
6. A. "... the animated month-old baby ..."	A seems better than B	72	6
B. "... the month-old animated baby ..."	B seems better than A	25	7
	A seems about the same as B	17	2
7. A. "... the happy celebrating citizens ..."	A seems better than B	81	9
B. "... the celebrating happy citizens ..."	B seems better than A	17	4
	A seems about the same as B	16	2
8. A. "... the happy cavorting citizens ..."	A seems better than B	69	11
B. "... the cavorting happy citizens ..."	B seems better than A	28	2
	A seems about the same as B	11	2
9. A. "...the modern sophisticated equipment..."	A seems better than B	56	6
B. "...the sophisticated modern equipment..."	B seems better than A	39	6
	A seems about the same as B	18	3
10. A. "... the complex modern equipment ..."	A seems better than B	66	5
B. "... the modern complex equipment ..."	B seems better than A	32	8
	A seems about the same as B	15	2
11. A. "...the nefarious crooked politician..."	A seems better than B	39	6
B. "...the crooked nefarious politician..."	B seems better than A	55	8
	A seems about the same as B	20	1
12. A. "... the lying crooked politician ..."	A seems better than B	34	8
B. "... the crooked lying politician ..."	B seems better than A	61	5
	A seems about the same as B	19	2

Questions on the English Language JWNey, Fall 1981

Here are some questions designed to find out what you feel about the order of words in some phrases in the English language. Check the appropriate blank.

1. A. " ... a blind black young happy Belgian sheep dog ... "
   B. " ... a blind black happy young Belgian sheep dog ... "

A seems better than B	15	3
B seems better than A	29	2
A seems about the same as B	11	2

2. A. " ... a blind young happy black Belgian sheep dog ... "
   B. " ... a blind happy young black Belgian sheep dog ... "

A seems better than B	26	3
B seems better than A	20	3
A seems about the same as B	9	1

3. A " ... a happy young blind black Belgian sheep dog ... "
   B. " ... a happy young black blind Belgian sheep dog ... "

A seems better than B	31	4
B seems better than A	11	2
A seems about the same as B	11	1

4. A. " ... a happy blind young black Belgian sheep dog ... "
   B. " ... a young happy blind black Belgian sheep dog ... "

A seems better than B	16	1
B seems better than A	24	2
A seems about the same as B	15	4

5. A. " ... a blind young happy black Belgian sheep dog ... "
   B. " ... a blind black young happy Belgian sheep dog ... "

A seems better than B	28	3
B seems better than A	7	0
A seems about the same as B	20	4

6. A. " ... a blind happy young black Belgian sheep dog ... "
   B. " ... a blind black happy young Belgian sheep dog ... "

A seems better than B	24	2
B seems better than A	12	1
A seems about the same as B	19	4

7. A. " ... a happy blind young black Belgian sheep dog ... "
   B. " ... a happy young blind black Belgian sheep dog ... "

A seems better than B	17	1
B seems better than A	23	4
A seems about the same as B	15	2

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